NMP

Sun 11 NOV 2016

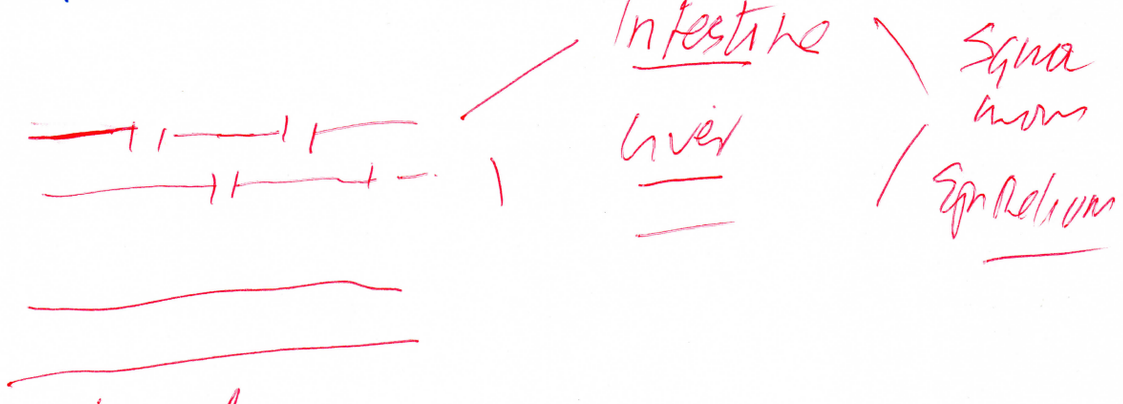
Distribution

In Surgery
NMP
—
Barrier

membranes, blood vessels, capillaries. MCQ?

Continuous, fenestrated, discontinuous types of blood vessels

#



Discontinuous — Liver - Sinusoids

1: fat 2: muscle 3: nervous system

4: Intestinal villi 5. [illegible] 6. endothelial

bone marrow - lymph glands - spleen #

Blood Brain Barrier

Paul Ehrlich 1854_1915

A # Astrocytes B # Microglia

B # Oligodendrocytes + myelin C #

C # Ependymocytes

tight Junctions

Placental Barrier FAS-

1.# Do NOT A: Diffused B: Weight > 600-1000

Pharmacology, absence of basis (MCQs)

#

Mr Swan

2018

MW II

DRUG METABOLISM & Excretion

mca*

mCat

Receptors # Absorption # metabolism

Free drug -

The liver — Gut, Kidneys, Blood, Skin, Nerves, Lungs.

Neurones - *

metabolism — (1) H_2O Solubility (Hydrophilicity) ; (2) Reduces Pharmacological Agents

Lipid VS water Solubility

lipophillic → greater absorption →

↓

reabsorbed from glomerulus

↓

excreted when hydrophilic

(1)

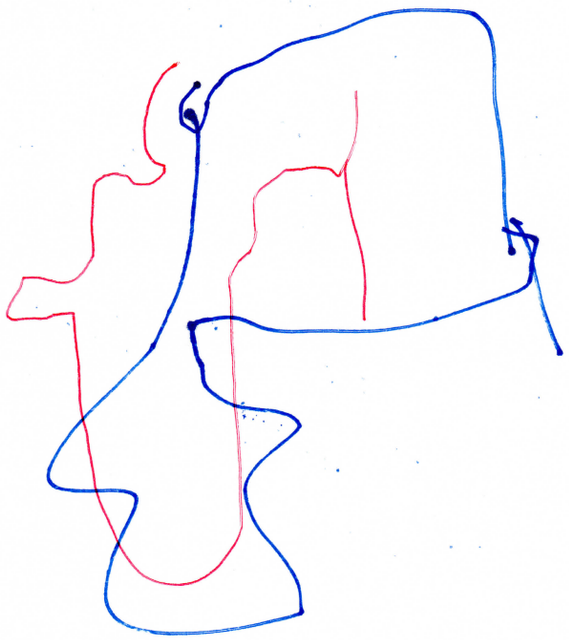
(2)

(3)

NMR

DNS MXE

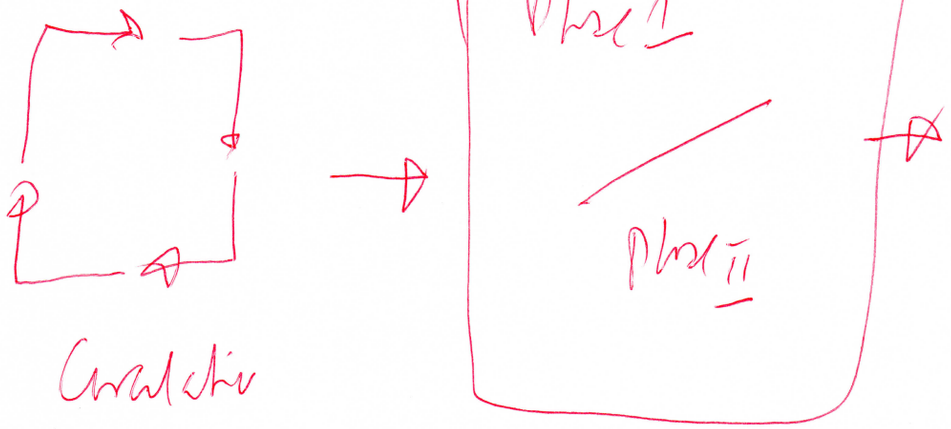
MxS



Drug Reabsorption #

Reabsorption → lipophilic #

Void solute



Water soluble metabolite

Conjugation

Urine

OAMP

Drug MoE

MRS
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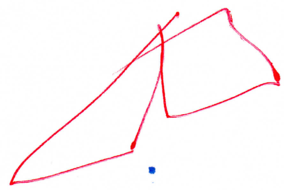
Phase I



Phase II

Functionalization

Conjugation

Drug → [(R)] → Drug (R)

Chemically Reactive

(R)

Oxidation

Hydrophilic (P)

H_2O

Excretion

Oxidation + Conjugation → (Polarity + H_2O →) → Excr.

NMD

Phase 1

metabolism.

Lms.

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Liver → Cyp 450 – Enzyme family #

Reduction

Oxidation – Phase 1 *

hydrolysis $H_2 + O_2$ #

Drug –H → Drug OH Reaction.

Cyp450

ER – endoplasmic

Phase II   Reticulum

Polar metabolites →

Catalysis → transferase –

transfer →

Phase II   lower toxicity lower Pharmacological effect

nmp

CMS
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Phase II

Conjugation

↓

H_2O Soluble Excretion

Glutathione Found in Liver *

Glucuronide H_2O Soluble

Drug (R) —(Glucuronide)→ Drug Glucuronides *

* Glycine, glutathione, sulphate, acetyl, methyl

Drug Active Drug Metabolite

Codeine — Morphine — analgesic.

Imipramine — Desipramine Antidepressant

CYP450 → OH+
O_2^+

Phase I Oxidation

Aspirin (A) Liver

Phase 2 Conjugation Increase

A+ Polar Water Soluble

MS

CYP-450 1 — Substrats

CYP1A2 — Theophyllin.

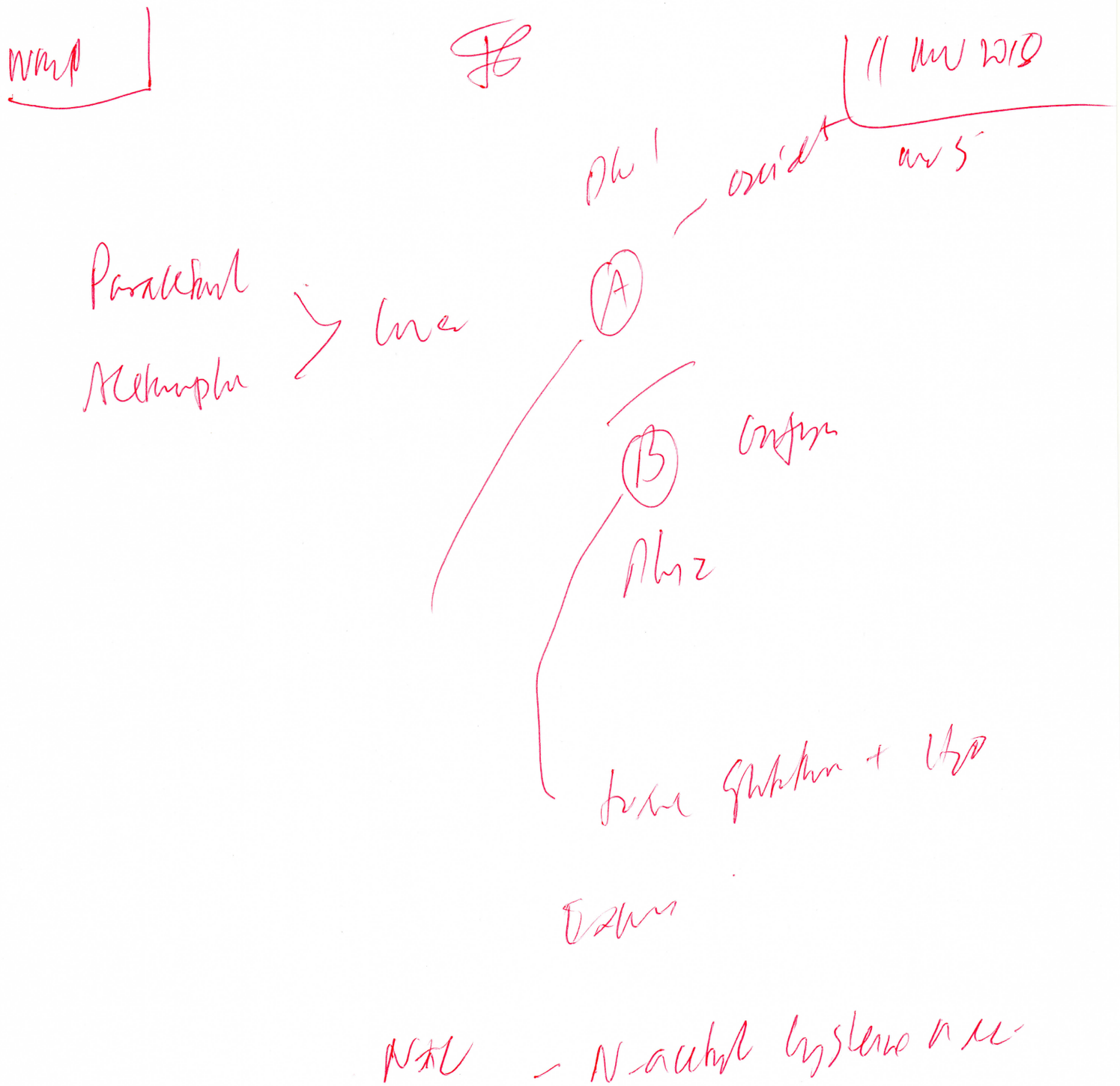
CYP2C9 — warfarin

CYP2C19 — Omeprazole

CYP2D6 — Codeine

CYP2E1 — ethanol

CYP3A4 — Lovastatin.



NMP

86

Mr S

Excretion

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2018

1 * Urine < Low molecular weight subst

2 * Bile Conjugates < Large mw subs

3 * Faes not absorbs.

4 * Sweat water soluble →

5 * Lungs volatile subs

6 * Saliva LMC

7 * Breast lipid

9 * Hair

P 10

MPHP

Rate of Drug Elimination

Mr

2015

MCQ*

High Concentration → HROE

Low Concentration → LROE

Rate of Elimination ∝ to amount of drug in body.

ROE ∝ Drug in Body.

Yes Polar

No non polar

Wt of cycling

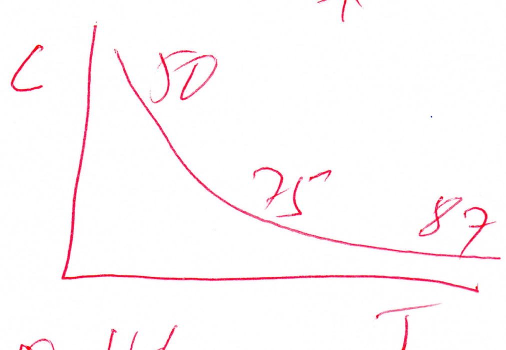
Ionized ∝

Yes

Applicable

FOK.

*



O H/L.

To Unionized drug

Zero order

F First order kinetics

1st

Zero order kinetics

O P(1)

NMD

1

1

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Mon

Half life = 0.7 Vd

Clearance

$T_{\frac{1}{2}} = \frac{0.7 \times Vd}{\text{Clearance}}$

$\text{Clearance} = \frac{0.7 \times Vd}{t_{1/2}}$

$2 \times \text{Clearance} = \frac{0.7 \times Vd}{T}$

Zero order kinetics

$0.7 = \frac{2 \times \text{Clearance} \times T}{Vd}$

NO

JG

M S.

1 Nov 2019

Absorption.

Elimination.

Excretion

Formula for 0.7 constant — To add ↑

$$\text{Clearance} = \frac{0.7 \times Vd}{T_{1/2}}$$

To tackle → drugs

Two additional medicines

Zero order — 1st order.

NO — Constant dept a

Breakdown. — Eliminate

eliminate → Rate of

constant.

Choose PT conditions & calculate medicines

To add medicines

LTC

1.2018

Mr Mich

Assessments 2019

1 MCQ Jan — A 3 sets 2hrs NAP

2 Feb LTC

3 Mar LWE

4 Ap Adv. SM.

5 May Dissertation

A (1) 25? — Shortanswer (2) B

C Fill in Blanks

D A 25 ? 410

B Short ans

C Fill in Blanks.

NICE — National Institute of Care #

1# Enabling the patient to have a peaceful death, to die in place of choice, informed consent — empowerment of family, carer #

2# G standard Gold Standard #

Standard # Quality ←

#

GOLD Standards

LTC.

2018

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Gold standard

- Amber
- Liver
- Mental capacity
- Ventilating Death

1. Quality of care
2. Wordnots / Walkround
3. Patient outcomes

20 Key standard - Accreditation checklist

(5) GP collaborate (15) Care in first days

(6) Advance care plans (8) Reduce Hospitalization

LTC

20 Key Standards

20 Sustainability
19 Spiritual care
18 Dementia
17 Dignity
16 Bereavement
15 Care in final days
14 Relatives
13 Education + training
12 Reflective practice + training
11 Integrated pathways
10 Out of hours support
9 DNAR + Withdrawal
8 Reduce Hospitalisation
7. Symptom Control
6 Advance Care Planning
5 GP collaboration
4 Planning meeting
3 Documentation
3. Team-work
1 Leadership + Support

10 To include in LTC

DNAR Do not resuscitate
VOD Verification of Death policy

LTC

Slow 20

Advance Care planning

Good enough

FU

Who ○ Name of Spokesperson
Or Lasting Power of Attorney (Health)

Where ○ Most appropriate place
○ Where they wish to happen
○ Where they do not wish to happen

How ✓ Opportunistic informal conversations
Formalised Systematic

20 4 7

Other Specialist input e.g. organ donation

Gold Standard ✓ C's #

P17

LTC

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Common < Pharm / Lab — Asgn.

Rs 150/year/Pt { Preferred Pharmacies / Pledge of Care }

Exclude
LCP
Liverpool

The Amber Care Bundle

Recruits about 1/12 visit #

6 Sales
10 Sales
10 Sales

1. Home care service

2: Rs 1500/year/pt — Unlimited visit #

- NSG < dress / Inject — 1 (10)

Par / 1 pt

10 nurses

Car

- Bp

Ex line →

- Meds

Specialists-Consult — Ch

1 Pharm
1 doctor
1 Inform.

Consult GP

10 Sales

P 18 — 1 Centre

LTC

Mr. M

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What does GSF can do?

1. GSF
Gold Standard Framework -

* Use patient care

Prepare a draft